



Warmhouse Beach Cleanup

ǫidiǫabit

(‘Camping Place While Drying Fish’)



Updates on the Warmhouse Beach Dump Superfund Site Cleanup

Newsletter #5

April 2021

The Makah Tribe and the U.S. Environmental Protection Agency are honored to bring you the fifth issue of ǫidiǫabit. The newsletter is designed to keep you up-to-date on activities at the Warmhouse Beach Dump Superfund Site. It lets you know about what’s happening at the site, opportunities to get involved, and information resources.

In this issue, we announce 2021 sampling plans, discuss current work being done to develop the human health risk assessment, and discuss how tribal traditional and cultural uses at or near the site will be considered in the human health and ecological risk assessment.

In the following issue, we will discuss sampling results, next steps in the Superfund process, and what goes into the selection of cleanup options. We will also re-visit the multi-step visioning workshop led by the Makah Tribe in 2012 and a summary of consultation actions with EPA in 2017.

Site Background and Superfund Remedial Investigation Process

The Makah tribal government has been monitoring the Warmhouse Beach Dump since 2001 because of concerns about what might be coming out of the dump. EPA added the Warmhouse Beach Dump Site to the National Priorities List in 2013. That listing made it eligible for cleanup under EPA’s Superfund program. EPA is at the early stage of the Superfund process, called the “Remedial Investigation” or “RI.” During this stage, EPA looks at data previously collected from the site and determines if more data is needed. During the RI, EPA performs risk assessments to determine whether and how people or the environment may be exposed to the contaminants at the site, and whether these contaminants present unacceptable risk to human and ecological health.

EPA’s Superfund Process

Place site on Superfund National Priorities List.

Remedial Investigation (RI):

- Find out nature and extent of contamination.
- Assess risks to people and environment.

Feasibility Study (FS):

Describe and compare possible cleanup alternatives using EPA’s 9 evaluation criteria.

Proposed Plan:

- Present EPA’s preferred cleanup option.
- Formal public comment period.

Record of Decision:

Issue cleanup decision.

Remedial Design:

Define how cleanup will be done.

Remedial Action:

Carry out site cleanup.



Remedial Investigation and Feasibility Study: EPA designs a thorough study of the site including sampling soils, surface water, and other media identified. During the Remedial Investigation, EPA performs risk assessments to determine whether the unique contaminants and pathways pose threats to people’s health or the environment.

Field Work to Date, Planned Summer 2021 Sampling

Since 2016, EPA, in coordination with the tribe, has conducted a number of sampling events in and around the Warmhouse Beach Dump. These events included the sampling of surface water and sediment from nearby creeks; soil within and next to the dump; and surface water, soil and sediment from areas that are not affected by the dump, called “background” areas. After evaluating this data, we determined additional sampling was needed. This year’s sampling event, also called Event 3, will include soil sampling in areas affected by the dump and not previously sampled. This will further distinguish these areas from background areas and fill in data gaps.

This additional sampling was planned for 2020 but delayed due to COVID-19. Sampling is now planned for summer 2021. EPA staff and contractors will follow firm safety protocols and coordinate with the Sophie Trettevick Indian Health Center and Makah staff before conducting any work on the Makah Reservation. After the sampling event, EPA will share a summary of work completed in the following newsletter.

Event 1 March 2016	Event 2 Aug/Sept 2016	Event 2.2 April 2017	Event 3 Summer 2021
<ul style="list-style-type: none"> • Topographical survey • Geophysical survey • Wet Season seep sampling • Wet season stream sampling 	<ul style="list-style-type: none"> • Soil Sampling • Dry season seep sampling • Dry season stream sampling 	<ul style="list-style-type: none"> • Test pits to evaluate waste thickness and content 	<ul style="list-style-type: none"> • Additional soil sampling to better understand the extent of contamination • Investigating possible sources of water (seeps) coming from the dump and sampling if found



Taking soil sample near a creek

Human Health Exposure Assessment

This sampling will help EPA complete the exposure assessment. Exposure assessment is also part of the RI. The exposure assessment determines where exposure(s) could happen and who could be exposed to site contaminants, now and in the future. A “conceptual model” identifies possible ways, called “pathways,” by which a person could be exposed. Exposure pathways include how and where people could come in contact with contaminated soil, sediment, water, or air. Examples of these pathways are eating contaminated food or swallowing contaminated sediment or water.

An exposure assessment makes assumptions about the behavior of people who may be exposed. For example, EPA may assume that an average adult goes hunting in the dump area a certain number of times per year and that each time the person is touching soil and surface water. The exposure pathways, exposure point concentrations (type and level of contaminants at the point a person is exposed), and behavior of people are all used to calculate risk in the risk assessment. EPA is using information from EPA guidance documents, other scientific studies, and site-specific information to determine likely exposures to site-impacted soils, sediments, creeks, plants, and other

things that may be affected by the dump. EPA is also working directly with Makah environmental staff to discuss the types of scenarios specific to the Makah that fall outside of an urban risk assessment scenario.

Risk and Cultural Uses

As part of the Remedial Investigation, EPA is performing human health and ecological risk assessments to determine whether the unique contaminants and pathways of exposure at the site pose threats to people's health or the environment. We ask: What are the risks that could be caused by these contaminants?

What are the impacts to the environment? Risk assessments determine if people, animals, and plants are exposed to site-related contamination above EPA's acceptable risk level.

For the Warmhouse Beach Dump Superfund Site, EPA is assessing chemical exposures to traditional users/tribal members, recreational visitors, workers, and trespassers that currently visit the site or could visit the site in the future. EPA is working with the Makah Tribe's cultural reviewer to identify risk pathways.

EPA's goal is to incorporate the Makah Tribe's knowledge, desires, and needs into the risk assessment process. Here are some of scenarios EPA plans to consider:

- *Are there terrestrial or aquatic plants used for medicinal or food purposes that pose risk in the dump area?*
- *Is there risk from ceremonial or recreational uses of the creeks in the dump area?*
- *Is there risk from consuming or using game animal products (such as deer, elk, and bear) near the dump site?*
- *What cancer risk and chemical hazard thresholds will be considered at the site and will the tribe have input?*

After EPA receives the analytical data from a sampling event, we validate the data. This ensures that the chemical data are of sufficient quality to be used in the Remedial Investigation. After the data validation process is complete, EPA can begin formal analysis of the data.



What is next for the Project?

EPA will continue to coordinate with the Makah Tribe as progress is made in the remedial investigation. After Event 3 sampling, EPA will determine whether there is enough information to complete the risk assessment process.

If no additional information is needed, EPA will be able to complete the remedial investigation and determine whether there is unacceptable risk to human health and the environment.

If there is unacceptable risk, a Feasibility Study will be needed to describe and compare possible cleanup alternatives.

Who Can I Contact for More Information?

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